Maryland Historical Trust

Maryland Inventory of Historic Properties number: QA-491

Name: 1700/MD 18 over Cox Creek

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended _____ Eligibility Not Recommended __X____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: _Anne E. Bruder_____ Date: __3 April 2001____

Reviewer, NR Program: __Peter E. Kurtze_____ Date: __3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. QA-491

SHA Bridge No. 17001 **Bridge name** MD 18 over Cox Creek

LOCATION:
Street/Road name and number [facility carried] MD 18 (Main Street)

City/town Stevensville **Vicinity** X

County Queen Anne's

This bridge projects over: Road____ **Railway**_____ **Water** X **Land** ____

Ownership: State X **County** _____ **Municipal** _____ **Other** ____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
National Register-listed district ____ **National Register-determined-eligible district** ____
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ____ **Trestle** ____ **Timber-And-Concrete** ____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** ____ **Bascule Multiple Leaf** _____
Vertical Lift _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X:
Concrete Arch_____ **Concrete Slab** X **Concrete Beam** ____ **Rigid Frame** _____
Other _____ **Type Name** _____

DESCRIPTION:
Setting: Urban _____ **Small town** ___X___ **Rural** _____

Describe Setting:

Bridge No. 17001 carries MD 18 (Main Street) over Cox Creek in Queen Anne's County. MD 18 runs east-west and Cox Creek flows north-south. The bridge is located on Kent Island, in the vicinity of Stevensville, and is surrounded by marshland.

Describe Superstructure and Substructure:

Bridge No. 17001 is a 2-span, 2-lane, concrete slab bridge. The bridge was originally built in 1915. The structure is 35 feet long and has a clear roadway width of 20 feet. The out-to-out width is 24 feet. The concrete slab has a bituminous wearing surface and the structure has solid concrete parapets. The roadway approaches have steel guard rails. The substructure consists of two (2) concrete abutments and one (1) concrete intermediate pier at mid-length. There are flared, concrete wing walls and the bridge has a sufficiency rating of 50.7.

According to the 1997 inspection report, this structure is in fair to poor condition. The piers and wing walls are cracked and spalled and previous repairs are beginning to fail.

Discuss Major Alterations:

Bridge 17011 has had no major alterations, but is scheduled to be widened using the existing substructure in 1998.

HISTORY:

WHEN was the bridge built: 1915
This date is: Actual X **Estimated** _____
Source of date: Plaque _____ **Design plans** X **County bridge files/inspection form** ___
Other (specify): State Highway Administration bridge files/inspection form

WHY was the bridge built?

The bridge was constructed in response to the need for a more efficient transportation network and increased load capacity.

WHO was the designer?

State Roads Commission

WHO was the builder?

Unknown

WHY was the bridge altered?

N/A

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-1904 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. Most improvements to local roads waited until the years after World War I.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer, stated in 1906, "the general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do away with the further expense of the maintenance of expensive and dangerous wooden structures." Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

In 1930, the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase the load bearing capacities. The reinforcing bars increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

In 1933, a new set of standard plans were introduced by the State Roads Commission. This time their preparation was not announced in the Report; new standard plans were by this time nothing special - they had indeed become standard. Once again accommodating the ever-increasing demands of traffic, the roadway was increased, this time to 30 feet. The slab span's reinforcing bars remained the same diameter but were placed closer together to achieve still more load capacity.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a concrete slab bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. Although this bridge retains most of its features, it is an undistinguished example of a concrete slab bridge and some deterioration is evident.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains some character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including the slab, parapets, abutments, wing walls and pier, however some deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files _____ **SHA inspection/bridge files** X
Other (list):

Ketchum, Milo S.
1908 *The Design of Highway Bridges and the Calculation of Stresses in Bridge Trusses.* The Engineering News Publishing Co., New York.

1920 *The Design of Highway Bridges of Steel, Timber and Concrete.* Second edition. McGraw-Hill Book Company, New York.

Lay, Maxwell Gordon
1992 *Ways of the World: A History of the World's Roads and of the Vehicles That Used Them.* Rutgers University Press, New Brunswick, New Jersey.

Maryland State Roads Commission
1930a *Report of the State Roads Commission for the Years 1927, 1928, 1929 and 1930.* State of Maryland, State Roads Commission, Baltimore.

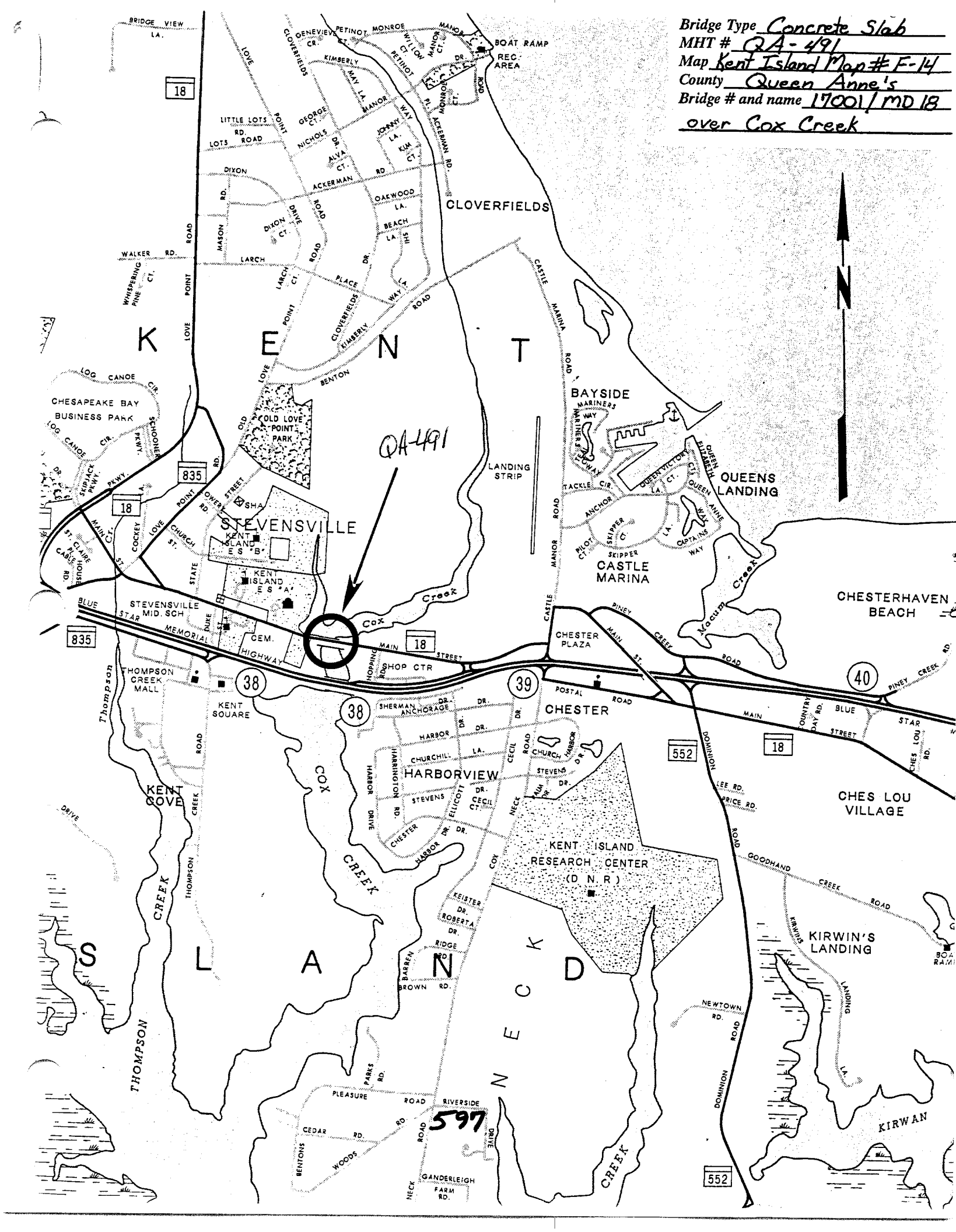
1930b *Standard Plans.* State of Maryland, State Roads Commission, Baltimore.

Taylor, Frederick W., Sanford E. Thompson, and Edward Smulski
1939 *Reinforced-Concrete Bridges with Formulas Applicable to Structural Steel and Concrete.* John Wiley & Sons, Inc., New York.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways.* The Myron C. Clark Publishing Company, Chicago and New York.

SURVEYOR:

Date bridge recorded 2/25/97
Name of surveyor Caroline Hall
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1685 **FAX number** (410) 296-1670


Bridge Type Concrete Slab
MHT # QA-491
Map Kent Island Map # F-14
County Queen Anne's
Bridge # and name 17001 / MD 18
over Cox Creek
QA-491
KENT
ISLAND
CLOVERFIELDS
BAYSIDE
QUEENS LANDING
CASTLE MARINA
CHESAPEAKE BAY BUSINESS PARK
OLD LOVE POINT PARK
STEVENSVILLE
KENT ISLAND E.S. 'B'
KENT ISLAND E.S. 'A'
STEVENSVILLE MID. SCH
CEM.
THOMPSON CREEK MALL
KENT SQUARE
KENT COVE
HARBORVIEW
CHESTER
CHESTER PLAZA
CHESTERHAVEN BEACH
CHES LOU VILLAGE
KENT ISLAND RESEARCH CENTER (D.N.R.)
KIRWIN'S LANDING
KIRWAN
SLAND NECK
LANDING STRIP
Cox Creek
Thompson Creek
Macum Creek
Goodhand Creek
BOAT RAMP REC. AREA
LOVE POINT ROAD
CASTLE MARINA ROAD
MANOR ROAD
MAIN STREET
BLUE STAR MEMORIAL HIGHWAY
PINEY CREEK ROAD
DOMINION ROAD
NEWTOWN ROAD
PLEASURE ROAD
RIVERSIDE DRIVE
597
18
835
38
39
40
552
N

1. QA-491
2. MD18 over Cox Creek (17001)
3. Queen Anne Co., Md
4. Caroline Hall
5. 3/97
6. MDSHPO
7. roadway approach
8. 1 of 6

1. QA-49

2. MD 18 over Cox Creek (17001)

3. Queen Anne Co., Md

4. Caroline Hall

5. 3/97

6. MDSHPO

7. south side

8. 2 of 6

1. QA-491
2. MD 18 over Cox Creek (17001)
3. Queen Anne Co., Md
4. Caroline Hall
5. 3/97
6. MDSHPO
7. north side
8. 3 of 6

1. QA-491
2. MD 18 over Cox Creek (17001)
3. Queen Anne Co., Md
4. Caroline Hall
5. 3/97
6. MDSHPO
7. roadway approach
8. 4 of 6

1. QA-491
2. MD 18 over Cox Creek (17001)
3. Queen Anne Co., Md
4. Caroline Hall
5. 3/97
6. MDSHPO
7. north parapet wall
8. 5 of 6

1. QA-491
2. MD 18 over Cox Creek (17001)
3. Queen Anne Co, Md
4. Caroline Hall
5. 3/97
6. MDSHPO
7. south parapet wall
8. 6 of 6

MARYLAND HISTORICAL TRUST

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: MD 18 over Cox Creek, QA Cointy Survey Number: QA-491

Project: MD 18 over Cox Creek Agency: SHA

Site visit by MHT Staff: X no ___ yes Name _____ Date _____

Eligibility recommended ___ Eligibility not recommended X

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Information from Rita Suffness indicates that the bridge does not meet the criteria for individual listing

QA-491
Bridge # 17001
MD 18 over Cox Creek

Documentation on the property/district is presented in: Not included in DOT bridge survey

Prepared by: _____

_____ 11/2/90
Reviewer, Office of Preservation Services Date

NR program concurrence: ___ yes ___ no ___ not applicable

_____ _____
Reviewer, NR program Date

Survey No. QA-491

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
____	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C.- A.D.900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
____	Industrial/Urban Dominance	A.D. 1870-1930
____	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaption

IV. Historic Period Themes:

____	Agriculture
____	Architecture, Landscape Architecture, and Community Planning
____	Economic (Commercial and Industrial)
____	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
____	Transportation

V. Resource Type:

Category: _____

Historic Environment: _____

Historic Function(s) and Use(s): _____

_____

_____

Known Design Source: _____